

**APPARATUS AND METHOD FOR HIGH RESOLUTION
IN-SITU ILLUMINATION SOURCE MEASUREMENT IN PROJECTION
IMAGING SYSTEMS**

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ABSTRACT

An in-situ apparatus for high resolution imaging in lithographic steppers and scanners (machines) is described. It comprises a multiple field in-situ imaging objective that images the source directly onto the machine reticle or objective plane. The image on the wafer side of the machine is then recorded electronically or in photo resist. Alternative embodiments 10 create source images at locations before or beyond the wafer plane that can be more conveniently recorded with sensors embedded in the wafer stage chuck.

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